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NEWSLETTER OF THE LONDON CHAPTER,
ONTARIO ARCHAEOLOGICAL SOCIETY
Grosvenor Lodge, 1017 Western Road, London, ON. N6G 1G5
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Late-"ish" Summer, 1994 94-4

THE CITY OF LONDON ARCHAEOLOGICAL MASTER PLAN

Malcolm Horne
City of London

We start the Speaker season off again with a presentation from Malcolm Horne on the work he has been doing for the City of London over the past year on documenting and managing the City's archaeological heritage. Malcolm will bring everyone up to date (including the fact that he has hired the Chapter's own Jim Wilson as an assistant on this project!) on what he has been up to. Malcolm also warns that he'd like a chance to pick anybody's brain at the speaker night about any information they may have about sites in the city. So come on out....who knows, you might just hear about archaeology in your own backyard, literally!! Meeting time is 8 PM at Grosvenor Lodge, on Thursday, September 8th.

Next Month: The second of our speaker nights is scheduled for Thursday, October 13th, also at Grosvenor Lodge at 8 PM. I understand Chris has someone very interesting lined up, by he's on vacation so I can't preview the speaker for you yet!

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EXECUTIVE REPORT

Things are generally quiet around the office during these dog days of summer. We hear through Neal that things are busy on the government side, with MCTR staff running around trying to assist in the development of both changes to the Heritage Act, and Planning Act. Assuming there isn't a Fall election (which would mean everyone's efforts get flushed!), there should be some exciting new changes to the way archaeology is conserved in the coming years. As details become available, we'll pass on any news. In the meanwhile, pester Neal if you want to know more.

Chapter Vice-President Chris Ellis recently was appointed to the Ontario Heritage Foundation. As the lone archaeologist on the OHF board, Chris'll play a key role in voicing the archaeological community's interests to the ever-changing OHF. Congrats Chris!!

While Neal runs around doing his "Government Stuff", not much has happened to upcoming manuscripts. Neal promises to get back on things as soon as he rids himself of some of his workload, "or I'll quit, to find the time!" No need for that, after all, don't you have evenings and weekends??!!

SOCIAL REPORT

For those of you who were planning to attend, you'll know that the Summer Picnic at Ray Crinklaw's got cancelled due to poor weather. There is some talk of having a Fall Picnic, and we'll let you know what's up once we know!

Chris Ellis's field school at the Brian site (Iroquoian village site in east London), is scheduled to proceed, starting in late August or early September. He'll be out there most Fridays, and perhaps other days. Anyone who'd like to go out and help Chris with his students, and/or to shake a screen or dig a pit ot two, please give Chris a call at his number on the front cover of this issue of **KEWA.**

The first annual Martha Blackburn Memorial Ride and Walkathon in support of Grosvenor Lodge is scheduled for Sunday, Sept. 25th. This will take place on the Kilbyrne Farm trails along the Thames River valley - a great way to see the fall colours and raise money for Grosvenor. Anyone interested in participating should call Grosvenor Lodge at 645-2845 for more information.

EDITOR'S REPORT

This month's contribution is another progress report on one part of Jim Wilson's ongoing research on the Early and Middle Woodland occupations of the Delaware area. This month features a report on Jim's test excavation of the Racher site.

Jim is one of a few members who have toiled to help fill pages of KEWA. As we begin a new season of newsletters, I note that our "Articles Pending" cupboard is looking a little bare. While we can fill the next two issues or so, prospects of further material is a little bleak. So if you've been sitting on something you've been planning to submit, but just haven't got around to it, please think of us, and fire something off. You'll make a nervous editorial committee quite happy!

THE RACHER SITE (AFHI-141): MORE EVIDENCE CONCERNING LARGE RIVERINE MIDDLE WOODLAND SITES ALONG THE MIDDLE THAMES RIVER DRAINAGE

Jim Wilson

Introduction

In 1992, as part of my ongoing dissertation research concerning reductions in residential mobility among hunter-gatherers, test excavations were conducted at the Racher Site (AfHi-141), a Middle Woodland occupation located three kilometres south of Delaware, in Middlesex County, Ontario. The Racher site, which was previously unregistered, was discovered during the survey component of the "Thames River Middle Woodland Settlement/Subsistence Project", which has received generous financial support from the Ontario Heritage Foundation. While only thirty-two square metres of the Racher site were excavated, due to the richness of the deposits and the site's single component nature, the results have the potential to contribute significantly to our understanding of the Middle Woodland period in the middle Thames River area.

Site Size, Location and Environment

The Racher site is located atop a low silty rise in the Thames River valley, on a section of bottom land known locally as the McNamara Flats. The Thames presently flows 60 metres to the west of the site, however it seems likely that Racher was oriented to an abandoned channel which lies immediately to the northeast (Figures 1, 2). Piece plotting of surface finds revealed that Racher covers an area at least 100 metres north/south by 40 metres east/west (0.4 ha), although the majority of the surface finds were located in a 30 by 30 meter area in the southwestern corner of the scatter (Figure 2).

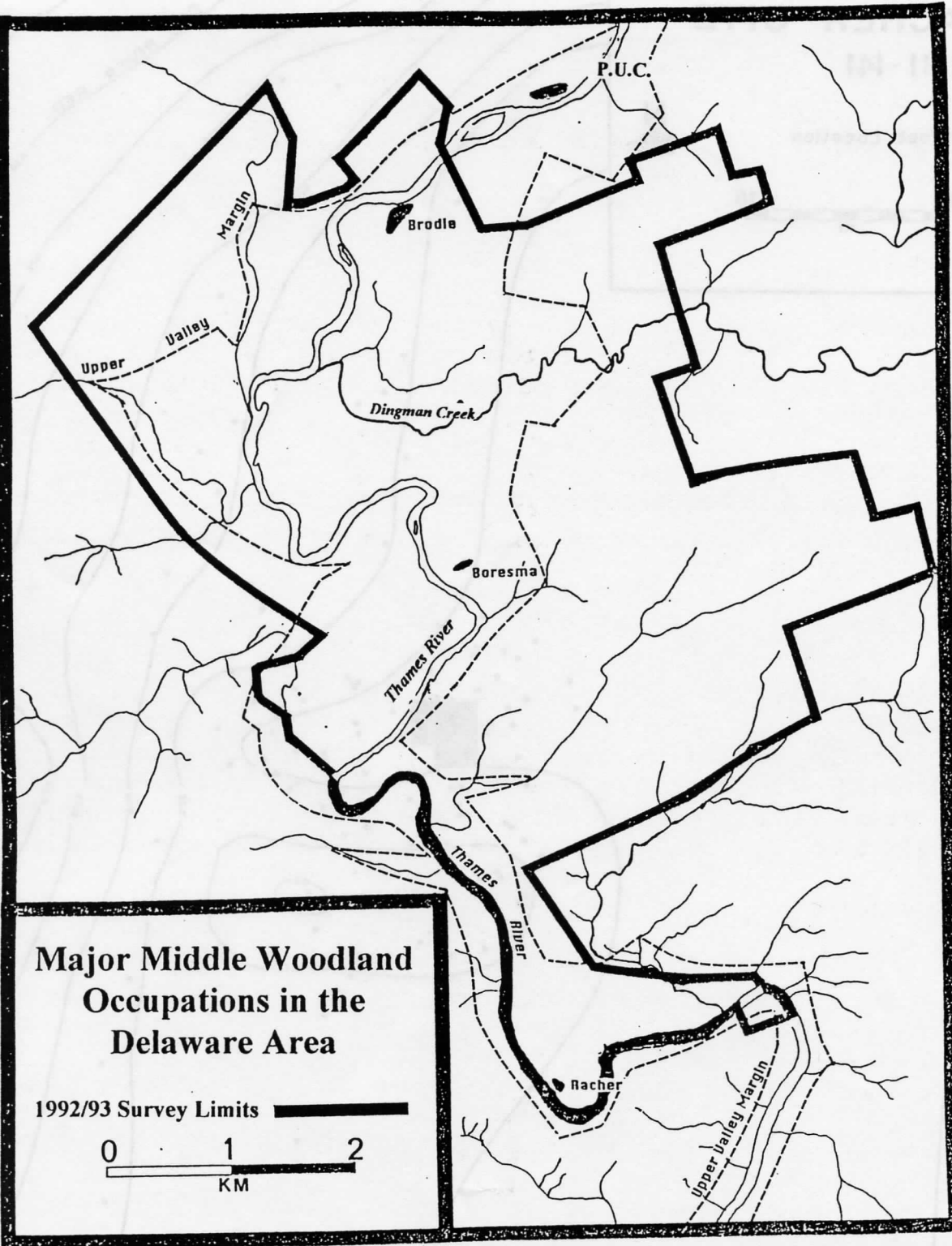
Excavation Methods

Based on the distribution of the surface materials, it was decided to open a small test block in the area of greatest artifact concentration, near the southwestern corner of the site. The excavation was carried out in one metre units with the plough zone screened through 1/4 inch mesh. All excavation units were referred to by the intersection coordinates of their southwest corner. Across most of the excavation area there was only one cultural strata, the plough zone, which was found to overlay a sterile silt layer in which it was possible to easily identify posts and features. However, in the northern half of the excavation block we discovered a second shallow layer which was excavated as "Level 2" (see Figure 3). Level 2 will be described in conjunction with the features.

Settlement Pattern

Posts:

Ten post molds were located, being on average 12.6 cm wide and extending 19.6 cm below the plowzone. With such a small area of the site excavated, it is impossible to determine if they repre-


P.U.C.
Brodie
Margin
Upper Valley
Dingman Creek
Boresma
Thames River
Thames River
Nacher
Upper Valley Margin
Major Middle Woodland Occupations in the Delaware Area
1992/93 Survey Limits
0 1 2
KM

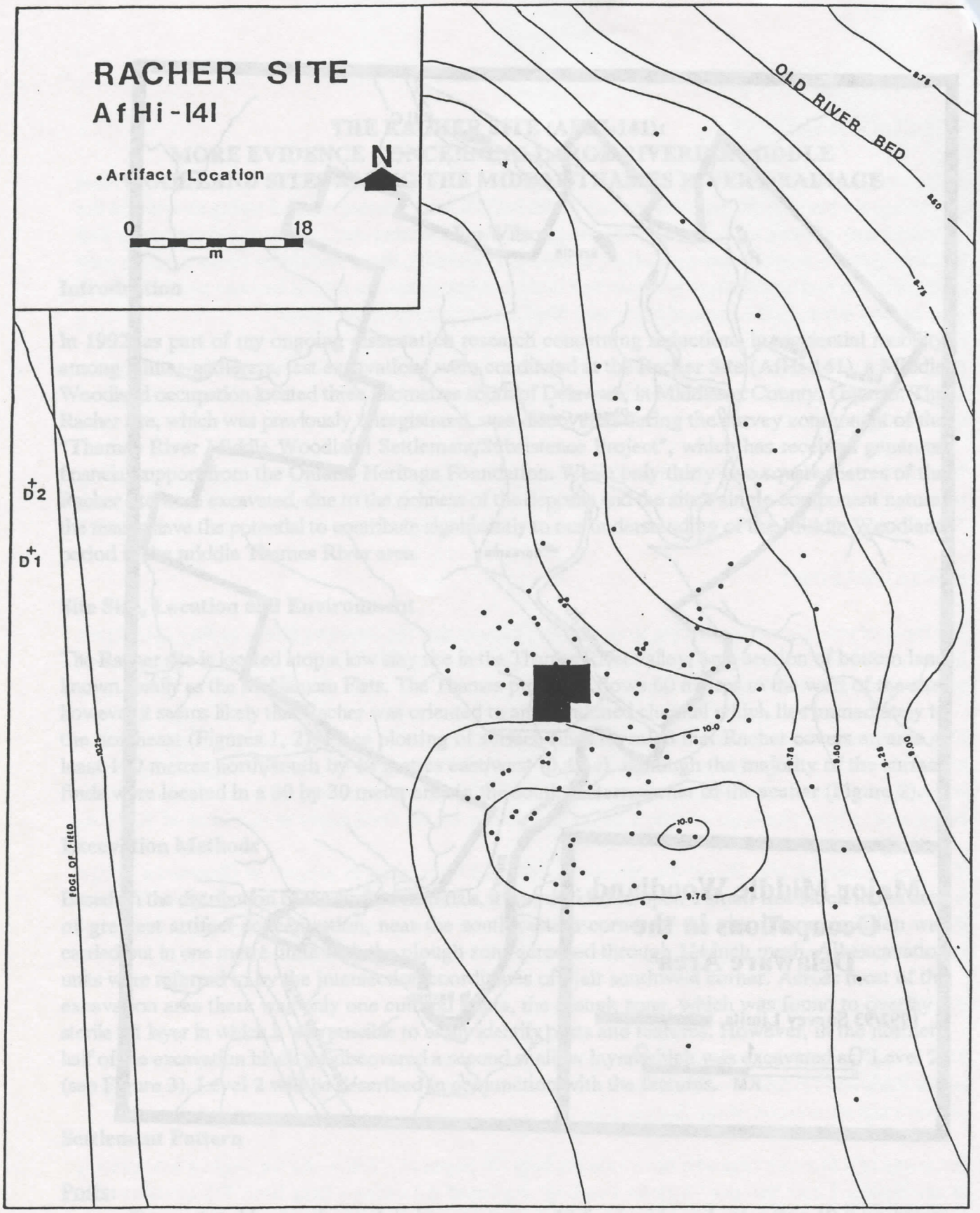


Figure 2: Surface Artifact Distribution and Contour Map of the Racher Site.

sent part of a structure, although this seems a logical possibility. At other riverine Middle Woodland sites in southwestern Ontario, including Donaldson (Finlayson 1977) and Boresma (Wilson 1990:30), numerous posts were uncovered, although house patterns were more difficult to define. It seems the much greater duration of occupation at these riverine Middle Woodland sites, when compared to easily interpreted Late Woodland settlements, mitigates against nice, neat settlement patterns.

Features:

Five features were uncovered, two of which (Features 3 and 5) were small basin shaped pits, while the remaining three were shallow, refuse-filled depressions, irregularly shaped in both profile and plan view. Feature 2 represented the basal portion of a larger refuse-filled depression which was excavated as "Level 2". Both features 3 and 5 appear to have been purposefully dug by the site's inhabitants, although they were quite shallow, measuring 12 cm and 10 cm in depth respectively. Table 1 presents the metric attributes of the features and tabulates their contents. For the purpose of Table 1, Level 2 deposits are considered part of Feature 2.

TABLE 1:
Feature Metrics and Contents
(measurements in cm)

Feature #	Length	Width	Depth	FCR	CDE	Faunal	Other
1	170	143+	30	20	0	769	1 Scraper
2	250	193+	35	28	8	274	*
3	40	30	12	0	0	0	*
4	70	40	4	0	0	34	*
5	26	26	10	0	0	0	*

Material Culture

Rimsherd Vessels:

Nine rim sherds from six separate vessels were recovered during our surface investigation and subsequent excavations. The primary external decoration on five (83.3%) of the six vessels consists of straight dentate stamping, while one vessel has incised markings which are sometimes crossed and some times vertical (Figure 4.c-d). The upper interior margins of all five dentate stamped vessels are decorated with a single band of straight dentate stamping, while damage to the interior of the incised vessel precludes observation of this trait. Four of the five dentate stamped vessels have flat lips, while the fifth was pointed. It was impossible to observe the attribute of lip shape with certainty on the incised vessel, although it appears to have been pointed. The five dentate stamped vessels averaged 10.1 mm thick when measured 25 millimeters below their lip and none of the vessels exhibited lip notching. Table 2 presents the metric and non-metric information for each of the vessels. The "design

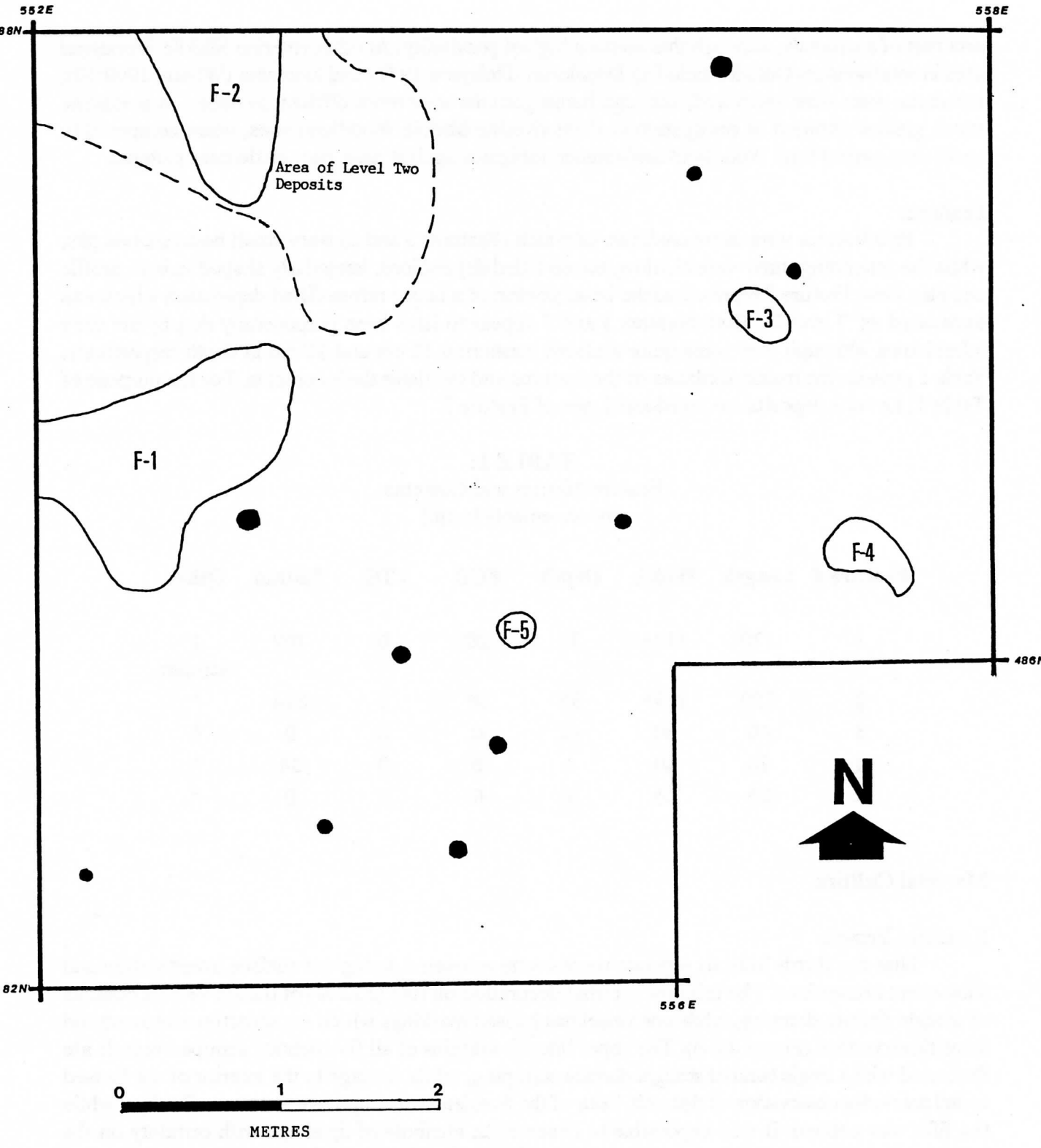


Figure 3: Settlement Patterns Documented From the Racher Site Excavations.

sequence" and "interior design sequence" and "profile" codes relate to those established by Finlayson (1977:90, 99, 302) and later appended by myself (Wilson 1990:49, 56). It proved necessary to create one new design sequence reference for the Racher site (#296), which consists of three rows of horizontals above obliques to the left.

While the sample of vessels is small, it is suggestive in terms of assigning the Racher site a rough temporal provenance. At the nearby Boresma site it was found that dentate stamping increased in frequency from 50% in the lowest level of the midden deposits (Level 5), to 77.7% in Level 3, before dropping to 28.6% in the upper level in which incised and undecorated cord marked vessels predominated. The Racher assemblage appears to best match the Level 3 materials from the Boresma site, which should post date AD 240± 60, as this was the date returned for wood charcoal sample submitted from the underlying Level Four deposits (Wilson 1990:79). While the Racher sample is too small to speak in anything approaching certainty, I believe there is good reason to believe that the occupation at the site did not begin until at least the mid third century AD, and perhaps even later.

TABLE 2:
Rimsherd Vessel Metric and Non-Metric Traits
(metric measurements in mm)

Vessel Number	1	2	3	4	5	6
Primary Tool	Incised	Dentate	Dentate	Dentate	Dentate	Dentate
Primary Technique	Linear	Linear	Linear	Linear	Linear	Linear
Secondary Tool	Dentate	Absent	Absent	Absent	Absent	Absent
Secondary Technique	*	Absent	Absent	Absent	Absent	Absent
Interior Tool	*	Dentate	Dentate	Dentate	Dentate	Dentate
Lip Notch	*	Absent	Absent	Absent	Absent	Absent
Lip Shape	*	Flat	Flat	Pointed	Flat	Flat
Thickness	*	8.3	12.5	8.9	10.7	10.7
Design Sequence	58	23	3	7	6	296
Interior Design Sequence	*	4	4	3	27	4
Profile	94	4	5	59	13	13

Body Sherds:

The collection of 118 body sherds also provides evidence to support the contention that the Racher site dates to the later part of the Middle Woodland period. Dentate stamping once again predominates, comprising 77.1% of the sample (Table 3). Moreover, there is a total absence of pseudo-scallop shell sherds, the presence of which has been demonstrated to be diagnostic of the early part of the Middle Woodland sequence in southwestern Ontario (Finlayson 1977, Wilson 1990).

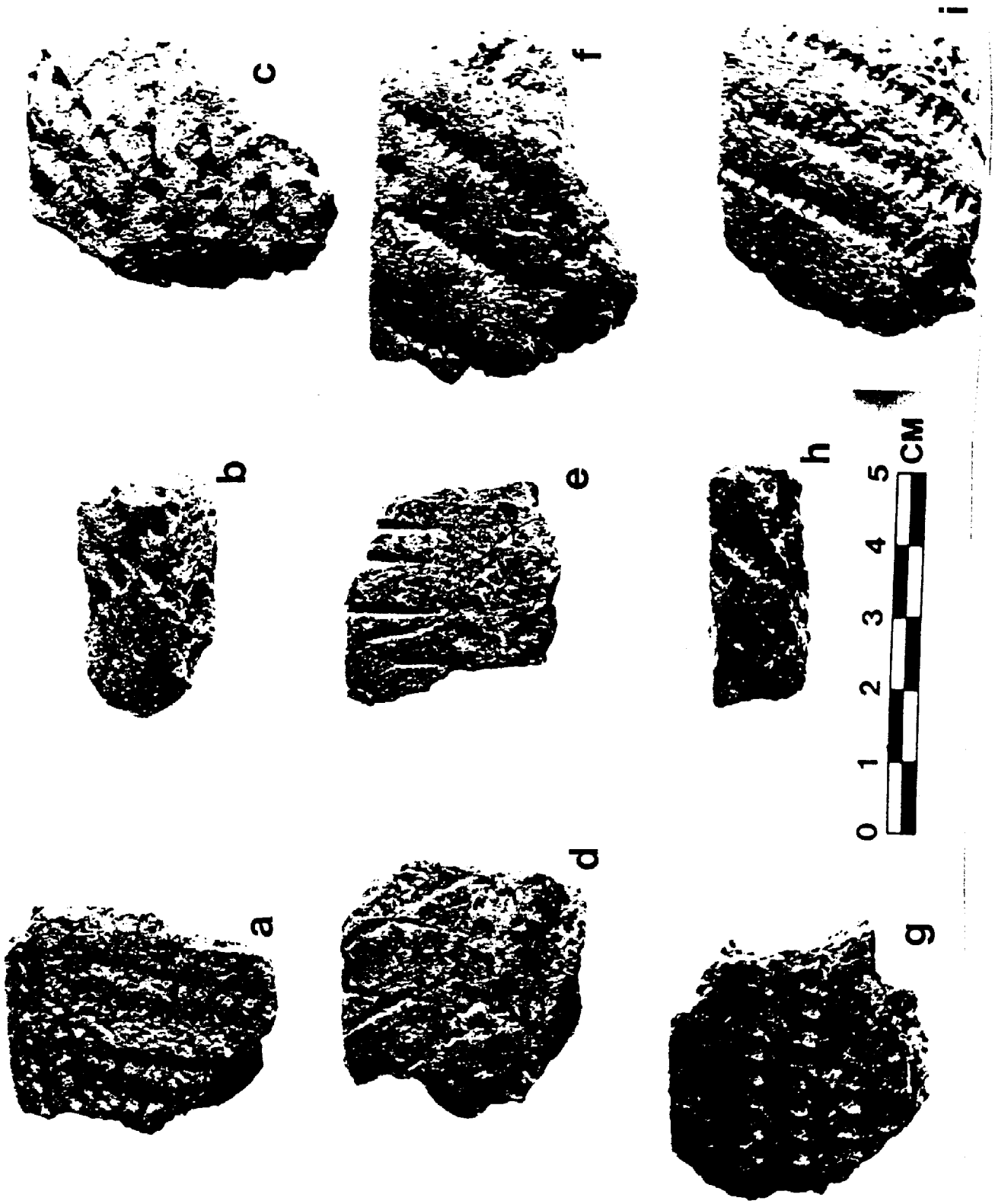


Figure 4: Decorated Ceramics From the Racher Site Investigations.

The interior surface treatment of all but one of the sherds is smooth, while the exception exhibits interior channeling. In addition, it was found that two of the corded body sherds have been decorated with fine trailed lines irregularly oriented across the face of the sherds, while ten body sherds and two rimsherds exhibit coil breaks.

TABLE 3:
Body Sherd Decoration and Unit of Recovery

	Dentate	Corded	Plain	Trailed	Total
Feature #1	24	1	1	0	26
Feature #2	1	2	0	0	3
Feature #3	0	2	0	0	2
Feature #4	1	0	0	0	1
Feature #5	1	0	0	0	1
Level #2	10	2	1	0	13
Plough zone	46	12	2	0	50
Surface	8	1	0	1	12
Total	91	20	4	3	118
Percentage	77.1	17.0	3.4	2.5	100

Bifacial Tools:

Twelve bifacial tools and/or fragments thereof were recovered; including five notched bifaces, two preforms, four biface tips and one lateral fragment. Of the notched bifaces, two have been reworked into scrapers, one of which is clearly side-notched (Figure 5.j), while the second has less distinct notches which extend down to the basal ears (Figure 5.k). There is one complete projectile which is also side-notched (Figure 5.h) and two basal fragments, one of which is side-notched while the second has an expanding stemmed hafting element. At the Boresma site it was found that expanding-stemmed hafting elements predominated in the lower levels of the midden while side-notched points were more characteristic of the later levels: post 240 AD (Wilson 1990:86). While the sample is extremely small at the Racher site, it appears that side-notching may predominate, which is at least consistent with the seeming late nature of the ceramic assemblage.

Of the four broken tips, one has been reworked into a scraper (Figure 5.g) similar in form to those documented in local Early Woodland assemblages (Ellis et al 1988). Three such tip scrapers were documented at the Boresma site, and it now seems clear that this form of recycling continues into the Middle Woodland period. Of the two unnotched bifaces or preforms, one was apparently rejected in the manufacturing process and has only been preliminarily flaked (Figure 5.c). The second is a typically formed Middle Woodland preform with slightly excurvate lateral margins and a convex base. Similar bifaces were common at the nearby Boresma site (Wilson 1990: Plate 14).

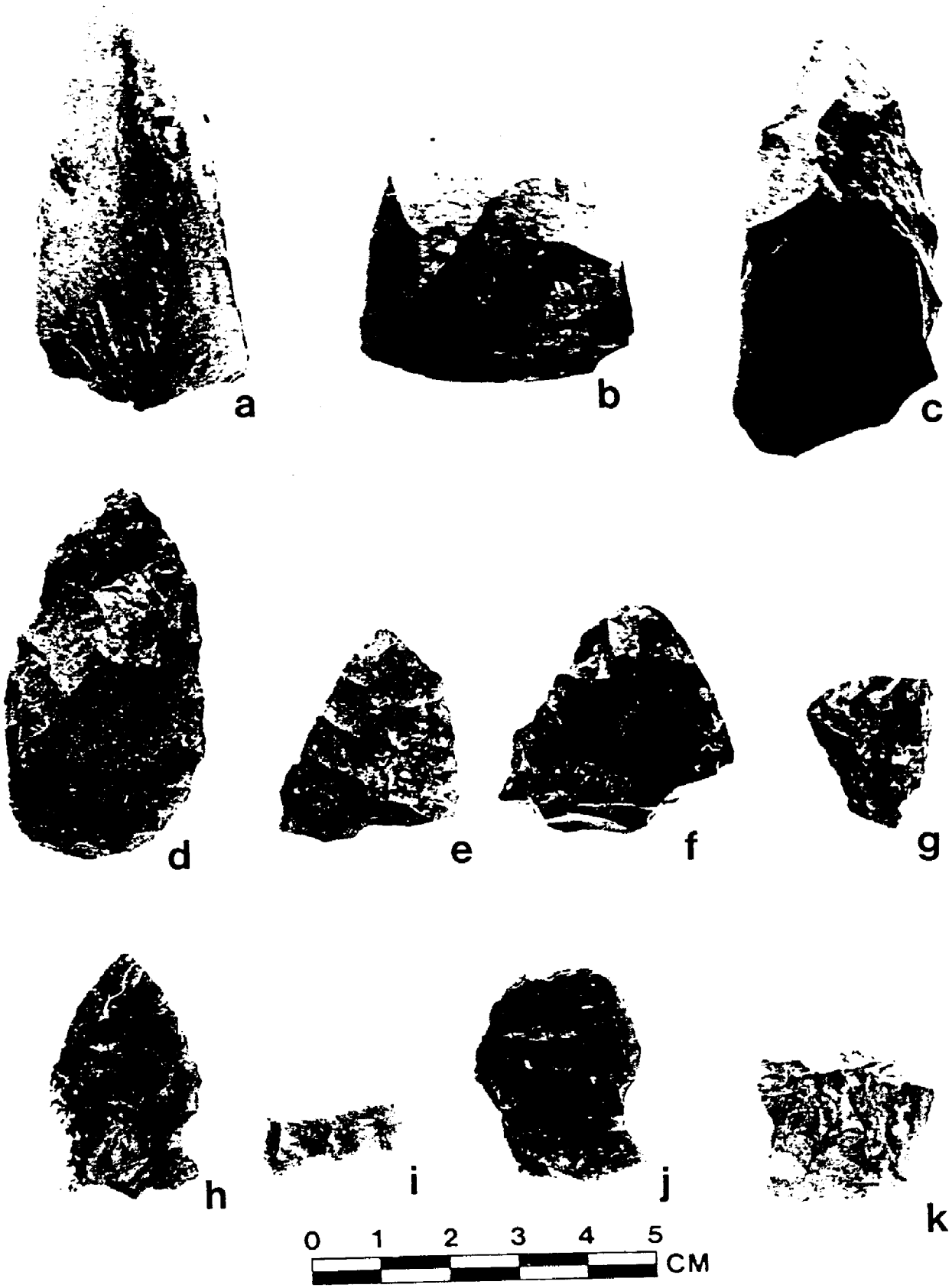


Figure 5: Lithic Artifacts Recovered From the Racher Site Investigations.

Wedges, Cores and Utilized Flakes:

Two opposed ridge variety wedges were recovered during the excavations. They measure 24.3 mm and 28.8 mm in length, 16.1 mm and 14.9 mm in width, and are 6.5 mm and 8.2 mm thick, respectively. It is interesting to note that both specimens were manufactured from Kettle Point chert. At the Boresma site, where 36 wedges were recovered, 65% were manufactured from Kettle Point chert, although only 24.6% of the chipping debitage and 32.4% of the bifacial tool sample was comprised of this material (Wilson 1990). On the basis of these figures, it seems that Kettle Point chert was a preferred material for wedges.

Two small random flake cores of Onondaga chert were also recovered. They measure 45.0 mm and 38.8 mm in length, 30.1 and 37.9 mm in width and are 26.8 and 20.8 mm thick, respectively. Both cores are of the low grade of material available in the local Thames River gravels, and each specimen exhibits a portion of water worn rind or patina. Two utilized flakes were also collected. The first consists of a large biface thinning flake of Onondaga chert, while the second is a primary flake of Kettle Point chert.

TABLE 4:
Projectile and Biface Metric and Non-Metric Data
(metric measurements in mm)

Cat.#	Length	Width	Thickness	Stem Width	Notch Width	Chert	Figure #
5	37.9	22.5	9	20.8	17	Onondaga	5.h
4	32.9	25.9	8.1	*	18.7	Kettle Pt.	5.j
51	51.6	28.6	13.8	na	na	Onondaga	5.d
70	*	38.9	23.1	na	na	Onondaga	5.c
25	23	25.8	9.7	*	21.8	Onondaga	5.k
6	*	19	7.4	na	na	Kettle Pt.	5.g
36	*	*	*	22.1	*	Kettle Pt.	5.i
8	*	*	*	*	*	Onondaga	5.f
52	*	*	*	*	*	Onondaga	na
8	*	*	*	*	*	Onondaga	na

* unobservable

Debitage Morphology, Distribution and Chert Types:

The 219 pieces of lithic debitage collected during the surface collection and excavation were analyzed following the classification scheme described by Lennox (1986). Table 5 provides a summary of the results.

As might be expected given the availability of Onondaga chert in the local Thames River gravels, it is the most common raw material at the site, comprising 67.1% of the collection by frequency

and 79.7% by weight. Of the 83 primary flakes of Onondaga chert, 19 exhibit a portion of water worn rind, while rind is not present on any Kettle Point debitage from the site. It is interesting to note that Kettle Point chert makes up 28.7% of the debitage collection by frequency but only 15.6% by weight, a pattern consistent with the Racher site's distance from Kettle Point (55 km). At the Middle Woodland Duncan McGugan site, located just south of Strathroy on a tributary of the Sydenham River, a drainage system in which small cobbles of Kettle Point chert are available in the till and river gravels, Kettle Point chert comprised 37.4% of the collection and 29 of 60 primary flakes exhibited a water worn rind or patina (Wilson and Ellis 1992:4).

As Table 5 indicates, all categories of debitage with the exception of shatter are well represented. When these data are viewed in conjunction with the biface rejected in manufacture and the presence of the two cores of local Onondaga chert, it appears that all phases of the manufacture of lithic tools were taking place at the site. This was also the case at the Boresma site, where antler tine pressure flakers and anvil and hammer stones were also present (Wilson 1990).

TABLE 5:
Racher Site Chipping Debitage
(weight provided in grams as bracketed figures)

	Onondaga	Kettle Pt.	Unidentifiable	Total
Primary:No Cortex	64 (107)	33 (37.9)	4 (12.8)	101 (157.7)
Primary:With Cortex	19 (95.5)	0	0	19 (95.5)
Secondary Flakes	38 (38.4)	18 (7.4)	0	56 (45.8)
Broken Flakes	26 (10.5)	12 (4)	5 (1.5)	43 (16)
Total Number	147 (251.4)	63 (49.3)	9 (14.6)	219 (3.15.3)
% Frequency	67.1	28.8	4.1	100.0
% Weight	79.7	15.6	4.6	100.0

Fire-Cracked Rock:

Two hundred and eighty-four fragments of fire-cracked rock were recovered from the plough zone and feature fill. In total, the fire cracked rock weighed 11.59 kilograms, with an average size of 40.8 grams.

Floral Analysis:

Wood charcoal from Features 1 and 5 was examined by Rudy Fecteau. In total, 8.94 grams were collected during flotation, with Ironwood (*Ostrya virginiana*) comprising 40.3% of the sample identifiable to species, pine (*Pinus* sp.) 1.6%, with indeterminable bark fragments comprising a further 54.5 %. Fecteau suggests that the presence of ironwood in both fea- tures hints at a selective process,

as ironwood ranks with hickory as an effective fuel for fires, based on available gigajoules (1994:37).

Faunal Analysis:

As was the case at the nearby Boresma site, bone preservation in the silty flood plain soils at the Racher site was excellent. The faunal collection consists of 1311 elements and was analyzed by Christine Dodd. A total of 977 elements could be identified to class or lower, and this information is presented in Table 6. Mammal bone dominates the faunal assemblage (90.3%), with white-tailed deer comprising 88.4% of the mammal bone identified to species (MIN=7). All parts of the deer are present, although Dodd suggests the apparent dominance of teeth and foot bones may be attributable to the fact that they do not disintegrate easily and are more readily identified during analysis. Six other mammal species including woodchuck, black bear, chipmunk, rabbit and beaver were also identified, although they comprise only 11.6% of the mammal bone identified to species. One deciduous carnivora tooth, three deciduous deer teeth and one immature woodchuck ulna provides the only evidence for sub-adult individuals in the collection.

TABLE 6:
Faunal Specimens Identified to Class or Lower

Class, Family or Species		**Frequency**	**% of Total**
White-tailed Deer	*Odocoilies virginianus*	122	12.5
Woodchuck	*Marmota monax*	5	0.5
Black Bear	*Ursus americanus*	2	0.3
Muskrat	*Ondatra zibethicus*	2	0.2
Eastern Chipmunk	*Tamias striatus*	2	0.2
Rabbit	*Leporadie sp.*	1	0.1
Beaver	*Castor canadensis*	1	0.1
Rodent	*Rodentia sp.*	1	0.1
Carnivore	*Carnivore sp.*	1	0.1
Unidentified Large Mammal		408	41.8
Unidentified Medium-sized Mammal		10	1
Unidentified Large to Medium-sized Mammal		302	30.9
Unidentified Mammal (undetermined size)		24	2.5
Walleye/Sauger	*Stizostedion sp.*	17	1.7
Unidentified Fish	*Osteichthyes sp.*	73	7.5
Frog/Toad	*Anura sp.*	2	0.2
Unidentified Bird	*Aves sp.*	1	0.1
Unidentified Mollusca	*Uniondae sp.*	2	0.2
TOTAL		**977**	**100**

TABLE 7:
Identified Deer Elements

Element	Frequency	Percentage
Teeth	43	35.3
Mandibles	7	5.7
Maxilla	1	0.8
Antler	9	7.4
Pterygoid	3	2.5
Femur	1	0.8
Radius	1	0.8
Patella	1	0.8
Acetabulum	1	0.8
Vertebra	1	0.8
Astragalus	18	14.8
Calcaneous	3	2.5
Navicular-arboid	5	4.1
Cuneiform	1	0.8
Phalanx	11	9
Metatarsal	8	6.6
Metacarpal	5	4.1
Metapodial	3	2.5
TOTAL	**122**	**100.1**

Fish bone was also present in the collection, with 38 elements recovered during the screening and a further 52 recovered from the heavy fraction of our flotation samples. Only 17 of these elements could be identified to species, all of which were walleye/sauger. In addition to the mammal and fish elements, two frog/toad bones, one bird element and two unidentified freshwater clams were also identified.

Discussion

While only a small area of the Racher site was investigated, a great deal of interesting and suggestive data was generated. One of the more interesting patterns to emerge regards the Racher site's similarity

with the nearby Boresma site. The Boresma site is also located on the meander belt of the Thames River and is only .05 hectares larger in size than the Racher site. While a much larger area was excavated at Boresma, both sites proved to be extremely productive in terms of subsurface features, posts, faunal material, ceramics, and lithic tools (Wilson 1990, 1991).

Perhaps the most interesting comparison between the two sites can be found in their faunal collections. At the Boresma site fish remains dominate (65.13%, N=29,743), however mammal bone was also common (29.9%, N=13,654). Moreover, there were two deer skulls at the Boresma site, which based on the stage of their antler growth could only have been taken in the mid-winter. Along with several other factors, including the diversified artifact assemblage, I have suggested that the Boresma site was occupied on and off over the coarse of the year, functioning as a base camp (Wilson 1990, 1991). At the Racher site the presence of the pickerel bone provides a good indication that the site was occupied in the spring, while the dominance of deer bone in the collection is suggestive of occupation during other seasons as well. Fortunately, there is a good collection of deer teeth from both the Racher site and the Boresma site, which can be cross-sectioned to determine the approximate season of their death.

The primary difference between the Racher and Boresma sites comes in relation to their ceramic assemblages, and therefore, I believe, involves the length of time the sites may have been occupied. The earliest radiocarbon date from the Boresma site, BC 180± 130, came from the lowest midden level in which 18.8% of the vessels were pseudo-scallop shell decorated. At the Racher site no pseudo-scallop shell vessels were located, nor were any of the body sherds so decorated. In fact, the Racher ceramics resemble those from the upper midden levels at Boresma, and I believe they probably post date AD 240. This suggests that occupation at the Racher site does not span the entire Middle Woodland sequence, but probably began some time in the third or fourth century AD.

There is good evidence that occupation continued until the seventh century A.D. at the Boresma site, suggesting the possibility that the Racher site represents a base camp for a separate community. To date, there have been four major base camp-like Middle Woodland sites located along the Thames in the immediate Delaware area. The Racher site is the southernmost, situated three kilometres down river from the Boresma site, while the Brodie site is located approximately three kilometres up river from the Boresma site (Figure 1). Just this spring a new Middle Woodland location, the P.U.C. site, was cursorily surface examined. This major site lies only a kilometre east of Brodie along the north bank of the Thames. With the help of Malcolm Horne and Dr. Peter Timmins, the P.U.C. site was demonstrated to consist of three Racher site sized loci, each of which produced dentate stamped and pseudo-scallop shell ceramics and various other classes of occupational debris, including lithics, faunal material and fire cracked rock.

In addition to these four sites, there is also the poorly known Burton site, a large Middle Woodland occupation located near the Kilworth bridge, 2.5 kilometres upstream from the P.U.C. site. The exact location of this site is presently unknown, although the London Museum of Archaeology has a collection of dentate stamped ceramics gathered by Jury from this location. The Westerb Pickerel site is also another poorly known, large, riverine location, situated approximately three kilometres down

river from the Racher site. This site is currently in pasture, however my limited test excavations conducted during the 1992 field season suggest that this site is at least as large as Boresma and Racher, and potentially as rich in terms of artifacts.

This series of large, rich, Middle Woodland sites, all situated within fourteen kilometers of one another, raises the possibility that there were several related Middle Woodland communities located along the middle Thames in the Delaware area. Given their close proximity, it seems unlikely that each of these sites was contemporaneously occupied by a separate band. Unfortunately, we still understand very little about what might have comprised a typical "band territory", or for that matter, how large the groups were that occupied these sites. This not withstanding, I believe it to be equally unlikely that these sites represent a series of sequential occupations by just a single group. As was pointed out earlier in the report, it appears that the period of occupation at Boresma and Racher overlap, and future work seems almost certain to demonstrate that several of these other locations were contemporaneous.

Base camp relocation may have proved necessary from time to time due to the depletion of locally available resources such as firewood, however an even more likely scenario which may have forced site relocation involves changes in the course of the Thames. As our field reconnaissance demonstrated, many archaeological sites in the Delaware area are located adjacent to abandoned channels of the Thames, including the Racher, Boresma, Brodie and P.U.C. sites. Occasional reorientation of the main river channel, or even minor changes affected the nature of an adjacent rapids, could easily render a prime fishing location undesirable.

With the Middle Woodland period spanning at least nine hundred years (200 BC-700 AD), it also seems likely that population growth and the concomitant budding off of new bands may account for the presence of some of these large riverine sites. In fact, it would be extremely unlikely if there was little or no population growth during the Middle Woodland period. The Racher site may represent the residue left by just such a community, as this location was only utilized during the middle to late Middle Woodland period. Presently, I am engaged in a larger plan of study involving an exploration of changes in settlement and subsistence between the Early and Middle Woodland periods along the middle Thames. Hopefully by the end of this program of research it will at least be possible to formulate more definitive statements concerning the nature of these large riverine Middle Woodland sites in the Delaware area.

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References

Fecteau, R.D.
1994 Archaeobotanical Remains From the Pocock Site (AfHi-134) a multi-component site (Early Woodland, Middle Woodland, and Early late Woodland), and the Racher Site (AfHi-141) a Middle Woodland site in Delaware Township, Middlesex County, Ontario. Unpublished report in the possession of the author.

Finlayson, W.
1977 **The Saugeen Culture: A Middle Woodland Manifestation in Southwestern Ontario.** National Museum of Man, Mercury Series, Archaeological Survey of Canada Paper 61.

Lennox, P.
1986 The Innes Site: A Plow-Disturbed Archaic Component, Brant County, Ontario. **Midcontinental Journal of Archaeology** 11:221-268.

Wilson, J.A.
1990 The Boresma Site: A Middle Woodland Basecamp in the Thames River Valley. Unpublished Master's Thesis, Department of Anthropology, McMaster University. Hamilton.
1991 A Bad Analogy? Northern Algonquian Models and the Middle Woodland Occupations of Southwestern Ontario. **Kewa:** 91(4):9-22.

Wilson, J. and C. Ellis
1992 The Duncan McGugan Middle Woodland Site. Report on File With the Ministry of Culture, Tourism and Recreation. Toronto.